

CLAIMS

- 1 A sheet like substrate comprising a substantially non-polar material having  
coated onto at least one side thereon an anchor coating to aid subsequent coating  
5 thereon of a polar coating and/or layer, characterised in that the anchor coating  
comprises
  - (a) a polymer comprising an optionally substituted  $\alpha$ ,  $\beta$  carboxylic acid optionally of  
high acid value preferably the polymer having a low  $T_g$ ;
  - (b) a polymer comprising an optionally unsubstituted  $\alpha$ ,  $\beta$  carboxylic acid optionally  
10 of low acid value preferably the polymer having a high  $T_g$ ;
  - (c) a cross-linker, preferably added after a period of time to a mixture of polymers  
(a) and (b) to cross-link the resultant coating composition and increase the  $T_g$  thereof.
- 2 A sheet as claimed in claim 1, in which the polar coating or layer is selected  
15 from: a pressure sensitive adhesive and/or a metal.
- 3 A sheet as claimed in claim 1 or 2, in which the polar coating is a metal layer
- 4 A sheet as claimed in any preceding claim in which the polar coating is  
20 aluminium.
- 5 A sheet as claimed in any preceding claim in which component (a) comprises  
a high acid imminated acrylic polymer.
- 25 6 A sheet as claimed in any preceding claim in which component (a) is present in  
an amount from about 50% to about 90% by weight of the dry coat.
7. A sheet as claimed in any preceding claim in which component (a) is present in  
an amount from about 70% to about 80% by weight of the dry coat.  
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8. A sheet as claimed in any preceding claim in which component (b) comprises  
an alkyl methacrylate polymer
- 9 A sheet as claimed in any preceding claim in which component (a) is present in  
35 an amount from about 5% to about 50% by weight of the dry coat.
10. A sheet as claimed in any preceding claim in which component (a) is present in  
an amount from about 10% to about 30% by weight of the dry coat.
- 40 11. A sheet as claimed in any preceding claim in which component (c) comprises  
an arizidine cross-linker

12. A sheet as claimed in any preceding claim in which component (c) comprises trimethylol-tris(N(methylaziridiny))propionate.
- 5 13 A sheet as claimed in any preceding claim in which component (c) is present in an amount from about 0.1% to about 20% by weight of the dry coat.
- 10 10. A sheet as claimed in any preceding claim in which component (c) is present in an amount from about 1% to about 10% by weight of the dry coat.
11. An anchor coating composition as represented in any preceding claim.
12. A liquid anchor coating composition comprising components (a), (b) and (c) as represented in any preceding claim plus a liquid carrier.
- 15 13. A liquid coating composition as claimed in claim 12, in which the liquid carrier is water.
14. A liquid coating composition as claimed in either claim 12 or 13 which further comprises a wetting agent.
- 20 15. A coating composition as claimed in any of claims 11 to 14 which further comprises a means to inhibit the cross-linking component (c).
- 25 16. A method for coating at least one side of a substantially planar self supporting sheet, the method comprising the steps of:
  - a) optionally treating the sheet surface (optionally by primer coat and/or corona discharge) to better receive a coating;
  - b) preparing a coating composition as claimed in any of claims 11 to 15,
  - 30 (c) applying and fixing said formulation to at least one surface of the sheet to form a coating thereon.
  - (d) optionally drying the coating on the sheet to remove excess liquid.
- 35 17. A method for coating at least one side of a substantially planar self supporting sheet, the method comprising the steps of:
  - (a) optionally treating the sheet surface (optionally by primer coat and/or corona discharge) to better receive a coating;
  - (b) preparing a coating composition as claimed in claims 16,
  - (c1) applying and fixing said formulation to at least one surface of the sheet to form
  - 40 a coating thereon.

(c2) just before, sequentially, or simultaneously with step (c1) deactivating the inhibition means to allow cross-linking; and

(d) optionally drying the coating on the sheet to remove excess liquid.

5 18. A method as claimed in claim 17, in which step (c2) comprises a change in pH.

19. A method as claimed in any of claims 16 to 18, which comprises the further steps of:

(e) waiting until cross-linking has substantially been completed; and then

10 (f) applying a further coating onto the anchor composition.

20. A method as claimed in claim 19, in which the further coat comprises an adhesive (optionally pressure-sensitive) and/or a metal layer (optionally aluminium).

15 21. A coated sheet obtained and/or obtainable by a method claimed in any of claims 16 to 20.

22. A coated sheet according to any of claims 1 to 10 or 20, in which the sheet comprises a cellulosic material, polymeric material and/or thermoplastic polymer,

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23. A coated sheet according to claim 22, in which the sheet comprises a polyolefin, polyurethane, polyester, polyamides and/or non-hydrocarbon polymer and which is optionally oriented in at least one direction.

25 24. A coated sheet or coating composition substantially as described herein with reference to Example 1

25. Packaging for an article, the packaging comprising a coated sheet as claimed in any of claims 1 to 10, 20 and/or 24.

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26. An article packaged with packaging as claimed in claim 25.

27. A label and/or graphic art display comprising a coated sheet as claimed in any of claims 1 to 10, 20 and/or 24.

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28. An article comprising a label and/or graphic art display as claimed in claim 27.

29. Use of a composition as claimed in any of claims 1 to 10, 20 and/or 24, for the purpose of coating a sheet to provide an improved anchor coating and/or heat resistance  
40 to said sheet and/or to subsequent coatings and/or layers thereon.